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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,577	01/16/2007	David Hobson	3345-01	7335

26645 7590 01/16/2009

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EXAMINER	
FERGUSON, CHANTEL L	
ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
01/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,577	HOBSON ET AL.	
	Examiner	Art Unit	
	CHANTEL FERGUSON-GRAHAM	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/5/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

1. This is the initial Office action based on the 10/598577 application filed January 16, 2007.

2. Claims 1-15 are pending and have been fully considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-15, are rejected under 35 USC 103 (a) as being obvious over FORSBERG (US PATENT 4094801), and in view of CRAWFORD (EP0288296), and in view of YOUNG (GB1061161), and further in view of MAGYAR (US PATENT 5851961).

Regarding claims 1-3, and 5-15, FORSBERG teaches additives for lubricants and fuels that consists of magnesium-containing liquid dispersion composition by mixing: (A) (metal base) at least one of magnesium hydroxide, magnesium oxide, hydrated magnesium oxide, or a magnesium alkoxide; (B) (surfactant) an oleophilic organic reagent comprising at least one carboxylic acid, a mixture thereof with at least one sulfonic acid, or an ester or

alkali metal or alkaline earth metal salt of the same; (C) water; and (D) at least one organic solubilizing agent for component B (abstract; col. 1 line 10 – col. 2 line 10; see also claim 1). Materials useful as component D include substantially inert, normally liquid organic diluents (col. 5 lines 55-56). Non-polar compounds or mixtures of compounds such as kerosene, mineral oil, and alkylbenzenes are examples of liquid diluents (liquid fuel) (col. 6 lines 5-16). Component B is at least one oleophilic reagent comprising any of several types of organic acidic compounds or salts or esters thereof. The aliphatic substituents usually contain a total of at least about 12 carbon atoms. Among the suitable reagents are the carboxylic and sulfonic acids. The preferred compounds for use as component B are the sulfonic and carboxylic acids, especially those having an equivalent weight of about 300-500 (surfactant has a molecular weight of less than about 1000). The sulfonic acids that are preferred are expressed for alkylaromatic sulfonic acids and more particularly for alkylbenzenesulfonic acids (hydrocarbyl substituted benzene sulphonic acid). Still another object is to provide magnesium-containing compositions useful as greases (wherein the composition is a grease), as detergent additives for lubricants or as corrosion inhibitors (demulsifier) (col. 2 lines 4-8). Examples 1-4 are particularly useful for employing in a variety of lubricants based on diverse oils of lubricating viscosity, including natural and synthetic lubricating oils and mixtures thereof (col. 13 lines 30-45). Magnesium hydroxide, 233 parts, is added to 600 parts of the alkylbenzenesulfonic acid of Example 1. The mixture is heated gradually to about 80°C over about 2 hours, whereupon a gel forms. A 602-part portion of the resulting gel is diluted with 200 parts of toluene. The solution is centrifuged and the toluene removed by blowing with nitrogen at 160-170°C (EXAMPLE 4; see EXAMPLES 1-18).

FORSBERG does not explicitly teach that the organic medium containing less than about 2 wt % of water, the dispersion has a solid content from about 15 wt % to about 84 wt %, and grinding the slurry.

However CRAWFORD and YOUNG do.

CRAWFORD teaches a fuel composition comprising a minor amount of a metal salt in the form of a particulate dispersion, and in TABLE 2 teaches that the water content in such a dispersion can be as low as 2.6 (w/w) % (page 5).

YOUNG teaches slurries of lose fluid properties and even grinding of its solid component as by ball mills (pg. 1 lines 60-64); and that the organic fuel oil having dispersed therein at least 40% by weight, based on the total weight of the dispersion (pg 1 lines 65-85; also see claim 1).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the composition of FORSBERG; by incorporating the water content of CRAWFORD and the dispersed content, grinding and milling technique of YOUNG.

The motivation would have been to provide complexes in liquid or solid form, and are useful as additives for lubricants and fuels and as protective coating compositions for metal surfaces (such as automotive undercoats and frame coatings) as taught by FORSBERG (abstract).

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding claim 4, modified FORSBERG does not explicitly teach the HLB for surfactants; however MAGYAR does. MAGYAR teaches lubricity agent for water/oil

dispersion compositions were the surfactant has a HLB value of about 10 to about 19 (col. 1 lines 64-65).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the composition of FORSBERG; by incorporating the surfactant HLB value of MAGYAR .

The motivation would have been to provide complexes in liquid or solid form, and are useful as additives for lubricants and fuels and as protective coating compositions for metal surfaces (such as automotive undercoats and frame coatings) as taught by FORSBERG (abstract).

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SCHWAB (US PG PUB 20030056431) teaches deposits in a direct injection gasoline engine are reduced by providing as fuel for the operation of said direct injection engine a fuel composition comprising the fuel-soluble reaction products.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANTEL FERGUSON-GRAHAM whose telephone number is (571)270-5563. The examiner can normally be reached on M-Th 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/

Primary Examiner, Art Unit 1797

Chantel Ferguson-Graham
Chemical Examiner
Art Unit 1797